The leprosy problem – back to the dermatologists

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Introduction

The incurable nature, coupled with the myths and mysticisms, kept leprosy away from the main stream of medicine. For similar reasons, public health experts also stayed away, leaving the problems mostly to the social workers and few leprosy specialists. It was the advent of an effective treatment with dapsone and later with MDT that leprosy came to be dealt within the public health terms, with emphasis on case detection and treatment. Hence the public health concept with its impact is a recent phenomenon in the long course of leprosy eradication. The principles on which the leprosy problem demanded a special attention was a) age old stigma about leprosy, b) need for clearance of the large number of backlog cases, c) special commitment of large number of NGOs, and d) availability of funds. To this may be added the urgency with which dapsone resistance was needed to be tackled.

WHO showed a quick response to this threat of dapsone resistance, mobilized the available scientific developments and came out with a MDT strategy, in line with a pioneer MDT project conceived at Germany by Professor Freeckson of the Borstel Institute and executed in Malta about 10 years before the WHO recommendation. More than anything else, MDT brought leprosy to the main stream of medicine. Whether it is with long course, short course or single dose of MDT, more than 14 million cases have been treated between 1985 to beginning of 2005 with very few relapses.

Dermatologists are also leprologists

Though leprosy is a multi-system disease, its predominant clinical manifestations are on the skin. It is natural, therefore, that the dermatologists are treating leprosy from an earlier time than any other specialists. Regarding their renewed role, it can better be phrased as ‘return of a disease to its original stakeholders’ after it has ceased to be a public health problem except in a few countries. The MDT program started with a well thought and rational strategy. However, the slow response to treatment coupled with haste for elimination resulted a series of modifications in the original strategy. Duration of treatment was curtailed step by step. In the fixed duration therapy (FDT) strategy, RFT was declared in spite of active signs and symptoms. Treatment of single lesion leprosy with a single dose of ROM (rifampicin,
ofloxacin, minocycline), declaring skin smear examination optional and ignoring thickened nerves without complete loss of functions are some of the changes against which criticisms were raised from many circles. The independent evaluation team for Global Alliance for Leprosy Elimination (GALE) viewed some of the approaches inappropriate and stated that protocols for diagnosis and treatment have been simplified too much. For some of these changes, the dermatologists have rightly voiced strong reservations, which failed to attract due attention in the programme.

**Dermatologists and the unsolved areas**

In the health care system of India, both district hospitals and teaching institutions have the services of dermatologists. Integration makes these the only qualified leprosy specialist. As part of this responsibility, their role would be to first revisit some of the following simplifications and other microbial issues about which they were critical so far.

**DIAGNOSTIC ISSUES**

Reviving basic laboratory procedures as skin smear and biopsy would be of much help for diagnosis of early and difficult cases. Experience on MDT in tuberculosis had considerably influenced in the design of MDT schedule for leprosy. However, where three sputum smear examination are mandatory for both diagnosis and discharge of TB cases, even a single skin smear examination in leprosy was first to be deleted/made optional in the leprosy programme.

**ASCERTAINING RELAPSE**

Timely detection and management of relapse would be an important task before the dermatologist. MDT may be robust, but evidence on its long term efficacy judged on prevention of relapse is not adequate. To use relapse as a measure of any drug efficacy, observation for a minimum period of 7 years and ideally 10 years is necessary. A review on relapse showed evidence for both low and high rates. While some of the publications have shown very low relapse rates, other reports indicated a rate as high as 20% in cases with BI 4+ or more. The time is now ripe for the possible surfacing of relapse, and dermatologists must take the lead in their identification and management and assist leprosy research institutions ICMR, ILEP and PMR institutions through a multidisciplinary approach. At the same time, the point of cure need to be defined if the present FDT continues, since many patients remain clinically active after RFT.

**DRUG RESISTANCE**

Though resistance for MDT is reported to be low as per certain review, this may reflect the reality of the problem or reflect virtually non-existent post-MDT surveillance. MDT in leprosy is mostly based on some of the analogies of MDT in TB. With better facilities for treatment, better understanding of the disease and an effective vaccine, MDR TB has already emerged as a threat and this should be taken as a lesson to ascertain that such risk does not exist in the leprosy control programme.
TRANSMISSION OF LEPROSY

The long continuing static new case detection rate (NCDR) showed slight reduction only recently and that too with the complete withdrawal of active case detection and strict restriction on the new case registration. The diagnosis based on complete loss of sensation; ignoring thickened nerves if not accompanied by functional impairment and classifying and treating cases as ‘others’ without registration are some of the strict measures adopted to check case detection. Moreover, the criteria stated above detect only advanced cases and so carry the risk of under-diagnosis. There is a need to compare the findings with the results of sample surveys as recommended in the workshop on surveillance.15 This workshop also suggested a standard definition of a new case to use it as the main indicator for the purpose of surveillance.

COMPLICATIONS

Coordination of prevention of disabilities (POD), including facilitation of reconstructive surgery and management of reactions and neuritis, is likely to be taken up by the deformity prevention and medical rehabilitation (DPMR) project16 introduced by the Government of India in 2006. In this project, district hospitals and teaching institutions plus other pioneer centers are proposed to cater secondary and tertiary care respectively and in this the role of the dermatologists will be crucial.

OPERATIONAL RESEARCH

Many researchers would view leprosy as an interesting model to understand chronic and infectious diseases. Almost all simplifications in the MDT programme deserve evaluation. Some of the issues for research suggested in the workshop16 are: a) a model to look into detection trend/transmission, b) testing the hypothesis that leprosy will disappear when PR attains the elimination level, c) developing a system of surveillance, d) participation of dermatologists and private practitioners in the ‘information monitoring system’ (IMS), d) investigations related to relapse and drug resistance. Dermatologists enjoy the comparative advantage of having not only the clinical skills but have also access to the bests of basic science researchers to develop preventive and diagnostic tools; to test new drugs, to investigate mechanism of nerve damage and even to explore the areas of genetic and molecular biology.

PROGRAMME EXPECTATIONS

While recognizing the contribution of dermatologists, further cooperation is expected in certain areas. There is an impression that in many cases some of their treatment schedules do not conform to the national guidelines. There is of course need to deviate when treating referred complicated cases. They must help in evolving a referral system in which leprosy cases will be treated at any place from PHCs to medical college, according to need. Through that, the majority of patients will receive free, quality MDT nearer home. The number of cases treated in medical colleges and district hospitals do not add to the statistics and IMS at any level. Generally MDT is not made available to the specialist in private sectors, since reports and returns are not received from them. This aspect needs to be improved. More
coverage needs to be given while stressing on nerve damage, role of immune reactions and program needs. Responsibility of mobilizing services such as reconstructive surgery and laboratory investigations from other faculties would also be with the dermatologists. They will have more say in the policy of integrating the disease into the centers of specialized care, so that their contribution will become part of the wider agenda of leprosy eradication.

References